Application No.: 10/675,020 17510 DIV1 (BOT)

Donovan, S., Transdermal Patch for Botulinum Toxin Administration

AMENDMENTS

Amendments to the Claims

1-15. (Cancelled)

 (Currently amended) A transdermal patch, comprising—a pharmaceutical composition, which-comprises:

a) a pharmaceutical composition comprising

i) a stabilized botulinum toxin provided in a dried state; and

- ii) an enhancing agent that is mixable with the stabilized botulinum toxin provided in a dried state and facilitates transdermal administration of a botulinum toxin in a bioactive form to a subdermal target site of a human patient without being administered to the patient's circulatory system; and
- an adhesive <u>layer</u> disposed to one side of the transdermal patch to removably secure the patch on the patient's skin;

wherein the pharmaceutical composition is incorporated into the adhesive layer; and

wherein upon contacting with a fluid, the fluid solubilizes the pharmaceutical composition, thereby permitting diffusion of the pharmaceutical composition from the adhesive laver.

- 17. (Currently amended) The transdermal patch of claim 16, wherein the adhesive <u>layer</u> is disposed around a depot containing the pharmaceutical composition.
- 18. (Original) The transdermal patch of claim 16, further comprising a plurality of needles extending from one side of the patch that is applied to the skin, wherein the needles

Application No.: 10/675,020 17510 DIV1 (BOT)

Donovan, S., Transdermal Patch for Botulinum Toxin Administration

extend from the patch to project through the stratum corneum of the skin without rupturing a blood vessel

- 19. (Original) The transdermal patch of claim 18, wherein the botulinum toxin is provided a depot in the patch so that pressure applied to the patch causes botulinum toxin to be directed through the needles and under the stratum corneum.
- 20. (Currently amended) The <u>A</u> transdermal patch of claim 16, wherein the botulinum toxin in the dried state is provided in a dry state in a plurality of wells, each of the wells covered by a membrane that is dissolvable with a fluid, and wherein the enhancing agent mixes with the betulinum toxin as the membrane over a well dissolves so that the absorption of the botulinum toxin is enhanced comprising:
 - a) a depot comprising a plurality of wells covered by a membrane, the wells containing a pharmaceutical composition comprising
 - i) a stabilized botulinum toxin provided in a dried state; and
 - ii) an enhancing agent that is mixable with the stabilized botulinum toxin provided in a dried state and facilitates transdermal administration of a botulinum toxin in a bioactive form to a subdermal target site of a human patient without being administered to the patient's circulatory system; and
 - an adhesive layer disposed to one side of the transdermal patch to removably secure the patch on the patient's skin;
 - wherein upon contacting with a fluid, the membrane covering the wells dissolves and the fluid solubilizes the pharmaceutical composition, thereby permitting diffusion of the pharmaceutical composition from the well.
- 21. (Original) The transdermal patch of claim 16, wherein the botulinum toxin is botulinum toxin type A.

Application No.: 10/675,020 17510 DIV1 (BOT)

Donovan, S., Transdermal Patch for Botulinum Toxin Administration

22-35. (Cancelled)

36. (Previously presented) The transdermal patch of claim 16, wherein the enhancing agent

comprises 1 part water, 1 part ethanol, and 1 part polyethylene glycol.

37. (Previously presented) The trasdermal patch of claim 36 wherein the ethanol is 90%

ethanol.

38. (Previously presented) The transdermal patch of claim 16, wherein the enhancing agent

comprises 1 part of 10% transfersomes and 0.9 part of a buffer.

39. (Currently amended) A transdermal patch, comprising-a pharmaceutical composition,

which comprises:

a) a pharmaceutical composition comprising

i) a stabilized botulinum toxin provided in a dried state; and

ii) an enhancing agent that is mixable with the stabilized botulinum toxin provided in a

dried state and facilitates transdermal administration of the botulinum toxin in a

bioactive form to a subdermal target site of a human patient; and

b) an adhesive layer disposed on one side of the transdermal patch to removably secure

the patch on the patient's skin.

wherein the pharmaceutical composition is incorporated into the adhesive layer; and

wherein upon contacting with a fluid, the fluid solubilizes the pharmaceutical

composition, thereby permitting diffusion of the pharmaceutical composition from the

adhesive layer.

Donovan, S., Transdermal Patch for Botulinum Toxin Administration

- 40. (Previously presented) The transdermal patch of claim 39, wherein less than 25% of the administered botulinum toxin permeates into a blood vessel.
- 41. (Previously presented) The transdermal patch of claim 39, wherein the enhancing agent comprises 1 part water, 1 part ethanol, and 1 part polyethylene glycol.
- (Previously presented) The transdermal patch of claim 39 wherein the ethanol is 90% ethanol.
- 43. (Previously presented) The transdermal patch of claim 39, wherein the enhancing agent comprises 1 part of 10% transfersomes and 0.9 part of a buffer.
- 44. (Previously presented) The transdermal patch of claim 39, wherein the botulinum toxin is botulinum toxin type A.
- 45. (New) The transdermal patch of claim 20, wherein the botulinum toxin is botulinum toxin type A.